

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	Art Unit:
NIELSEN, et al.	)	Examiner:
Serial No.: Not yet assigned	)	Washington, D.C.
Filed: even date herewith	)	August 7, 2001
For: PAI-1 DETERMINATION AND USE THEREOF	)	Docket No.: NIELSEN=2D

PRELIMINARY AMENDMENT

Commissioner of Patents  
Washington, D.C. 20231

S i r :

IN THE SPECIFICATION

Please replace the paragraph beginning at page 3, line 12 with the following rewritten paragraph:

The mutual relationship of these inhibitors is at present not fully clarified, although recent evidence indicates that at least three immunologically dissimilar types of plasminogen activator inhibitors exist. These include (1) protease nexin, (2) plasminogen activator inhibitor purified from placenta (Åstedt, B., Lecander, I., Brodin, T., Lundblad, A., and Löw, K., (1985) Thromb. Haemost. 53, 122-125), and (3) plasminogen activator inhibitors that inhibit u-PA and t-PA and which typically have been obtained from human endothelial cells, human blood platelets, and rat hepatoma cells (HTC), in the following referred to as endothelial type plasminogen activator inhibitor (e-PAI).

Please change the header at line 23 of page 3 to read as follows:

SUMMARY OF THE INVENTION

Please add the following paragraphs at line 14 of page 5:  
BRIEF DESCRIPTION OF THE DRAWINGS

The invention will now be described in more detail with reference to the drawings in which

Figure 1 is a zymogram showing reverse zymography for plasminogen activator inhibitor in culture fluid conditioned by

dexamethasone-treated human fibrosarcoma cells of the line HT-1080 or umbilical cord endothelial cells before and after passage through Sepharose columns coupled with monoclonal antibodies against trinitrophenyl (control) and e-PAI,

Figure 2 is a photography showing SDS-PAGE and reverse fibrin agarose zymography of HT-1080 cell medium and e-PAI purified by immunosorbent chromatography with a monoclonal antibody against e-PAI,

Figure 3 is a graph showing neutralization of inhibitory action of e-PAI by monoclonal antibody against e-PAI,

Figure 4 is a zymogram showing binding of complexes of u-PA with e-PAI to Sepharose columns with monoclonal antibodies against e-PAI,

Figure 5 is a photography showing immunoperoxidase staining of HT-1080 cells with a monoclonal antibody against e-PAI,

Figure 6 is a univariate analysis of tumour PAI-1 content in 57 patients with colon adenocarcinoma,

Figure 7A shows univariate survival curves of 293 patients with colon cancer; patients were divided according to an optimized plasma PAI-1 cut-off value (0.58 ng/mg protein); OS = overall survival, RR = relative risk, and the numbers indicate number of patients at risk,

Figure 7B shows univariate survival curves of 316 patients with colon cancer; patients were divided according to the optimized plasma cut-off value calculated from the first data set of 293 patients (Figure 7A); OS = overall survival, RR = relative risk, and the numbers indicate number of patients at risk,

Figure 8A shows plasma uPA, uPAR and PAI-1 levels in a patient who developed liver metastasis after surgical resection from colon cancer,

Figure 8B shows plasma uPA, uPAR and PAI-1 levels in a patient who had complete resection of her primary colon cancer and who did not experience relapse,

Figure 9 shows a uPA:PAI-1 complex ELISA measuring uPA:PAI-1 standard (●—●), uPA (■—■) and PAI-1 (▲—▲), and

Figure 10 shows the absorbance of a uPA:PAI-1 complex ELISA measuring uPA:PAI-1 complexes in 13 breast cancer cytosols.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS OF THE INVENTION

Please delete line 4 of page 22 to line 18 of page 23.

Please change the header at line 19, of page 23 to read as follows:

EXAMPLES

After line 5 of page 28, please insert the following new paragraphs:

All four clones have been deposited, under the Budapest Treaty, as follows:

<u>PAI-1</u> <u>Clone</u>	<u>Depository/Accession No.</u>	<u>Date</u>
1	ECACC 00112117	November 21, 2000
2	DSM ACC 2489	January 25, 2001
	ECACC 01010303	January 3, 2001
3	DSM ACC 2490	January 25, 2001
	ECACC 01010304	January 3, 2001
4	ECACC 00112120	November 21, 2000

The full name and address of the depositories are

DSM: Deutsche Sammlung von Mikroorganismen and Zellkulturen,  
Mascheroder Weg 1b, D-38124 Braunschweig GERMANY;

ECACC: European Collection of Animal Cell Cultures, Centre for  
Applied Microbiology & Research, Salisbury, Wiltshire SP4 0JG,  
United Kingdom.

The deposited material will be made available in accordance  
with U.S. law, in particular, 37 CFR §1.808(a) and (b).

Attached hereto is a marked-up version of the changes made to  
the specification and claims by the current amendment. The  
attached page is captioned "Version with markings to show changes  
made".

Respectfully submitted,

BROWDY AND NEWMARK, P.L.L.C.  
Attorneys for Applicant

By: 

Iver P. Cooper  
Reg. No. 28,005

624 Ninth Street, N.W.  
Washington, D.C. 20001  
Telephone: (202) 628-5197  
Facsimile: (202) 737-3528  
IPC:lms  
F:\,P\Plou\Nielsen2D\PTOPREAMEND.WPD

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification

Paragraph beginning at line 12 of page 3 has been amended as follows:

The mutual relationship of these inhibitors is at present not fully clarified, although recent evidence indicates that at least three immunologically dissimilar types of plasminogen [activator] activator inhibitors exist. These include (1) protease nexin, (2) plasminogen activator inhibitor purified from placenta (Åstedt, B., Lecander, I., Brodin, T., Lundblad, A., and Löw, K., (1985) Thromb. Haemost. 53, 122-125), and (3) plasminogen activator inhibitors that inhibit u-PA and t-PA and which typically have been obtained from human endothelial cells, [human fibrosarcoma cells (HT-1080),] human blood platelets, and rat hepatoma cells (HTC), in the following referred to as endothelial type plasminogen activator inhibitor (e-PAI).

Please change the header at line 23 of page 3 to read as follows:

[DISCLOSURE OF] SUMMARY OF THE INVENTION

Please add the following paragraphs at line 14 of page 5:  
BRIEF DESCRIPTION OF THE DRAWINGS

The invention will now be described in more detail with reference to the drawings in which

Figure 1 is a zymogram showing reverse zymography for plasminogen activator inhibitor in culture fluid conditioned by dexamethasone-treated human fibrosarcoma cells of the line HT-1080 or umbilical cord endothelial cells before and after passage through Sepharose columns coupled with monoclonal antibodies against trinitrophenyl (control) and e-PAI,

Figure 2 is a photography showing SDS-PAGE and reverse fibrin agarose zymography of HT-1080 cell medium and e-PAI purified by immunosorbent chromatography with a monoclonal antibody against e-PAI,

Figure 3 is a graph showing neutralization of inhibitory action of e-PAI by monoclonal antibody against e-PAI,

Figure 4 is a zymogram showing binding of complexes of u-PA with e-PAI to Sepharose columns with monoclonal antibodies against

e-PAI,

Figure 5 is a photography showing immunoperoxidase staining of HT-1080 cells with a monoclonal antibody against e-PAI,

Figure 6 is a univariate analysis of tumour PAI-1 content in 57 patients with colon adenocarcinoma,

Figure 7A shows univariate survival curves of 293 patients with colon cancer; patients were divided according to an optimized plasma PAI-1 cut-off value (0.58 ng/mg protein); OS = overall survival, RR = relative risk, and the numbers indicate number of patients at risk,

Figure 7B shows univariate survival curves of 316 patients with colon cancer; patients were divided according to the optimized plasma cut-off value calculated from the first data set of 293 patients (Figure 7A); OS = overall survival, RR = relative risk, and the numbers indicate number of patients at risk,

Figure 8A shows plasma uPA, uPAR and PAI-1 levels in a patient who developed liver metastasis after surgical resection from colon cancer,

Figure 8B shows plasma uPA, uPAR and PAI-1 levels in a patient who had complete resection of her primary colon cancer and who did not experience relapse,

Figure 9 shows a uPA:PAI-1 complex ELISA measuring uPA:PAI-1 standard (●\_\_\_\_●), uPA (■\_\_\_\_■) and PAI-1 (▲\_\_\_\_▲), and

Figure 10 shows the absorbance of a uPA:PAI-1 complex ELISA measuring uPA:PAI-1 complexes in 13 breast cancer cytosols.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS OF THE INVENTION

Please delete line 4 of page 22 to line 18 of page 23.

Please change the header at line 19, of page 23 to read as follows:

[MODES FOR CARRYING OUT THE INVENTION] EXAMPLES

After line 5 of page 28, please insert the following new paragraphs:

All four clones have been deposited, under the Budapest Treaty, as follows:

<u>PAI-1</u> <u>Clone</u>	<u>Depository/Accession No.</u>	<u>Date</u>
------------------------------	---------------------------------	-------------

1	ECACC 00112117	November 21, 2000
2	DSM ACC 2489	January 25, 2001
	ECACC 01010303	January 3, 2001
3	DSM ACC 2490	January 25, 2001
	ECACC 01010304	January 3, 2001
4	ECACC 00112120	November 21, 2000

The full name and address of the depositories are

DSM: Deutsche Sammlung von Mikroorganismen und Zellkulturen,  
Mascheroder Weg 1b, D-38124 Braunschweig GERMANY;

ECACC: European Collection of Animal Cell Cultures, Centre for  
Applied Microbiology & Research, Salisbury, Wiltshire SP4 0JG,  
United Kingdom.

The deposited material will be made available in accordance  
with U.S. law, in particular, 37 CFR \$1.808(a) and (b).